## CLAIMS

**WHAT IS CLAIMED:**

1. A method for reconfiguring a signal path in a computing system including a plurality of system domains, the method comprising:

detecting a predetermined condition triggering a reconfiguration of the computing system;

reconfiguring a signal path affected by the condition from a first mode to a second mode responsive to detecting the condition;

leaving the unaffected system domains configured in the first mode; and

operating the affected system domains in the second mode and the unaffected system domains in the first mode.

2. The method of claim 1, wherein detecting the failure includes detecting an interconnect failure.

3. The method of claim 1, wherein the computing system includes at least one system control board and wherein detecting the failure includes detecting the failure from the system control board.

4. The method of claim 1, wherein detecting the failure includes detecting the failure from the affected system domain.

5. The method of claim 4, wherein the computing system includes at least one system control board and the method further comprises notifying the system control board of the error from the affected system domain.

6. The method of claim 1, wherein detecting the failure includes detecting the failure during first operations.

7. The method of claim 1, wherein detecting the failure includes detecting the failure upon reset.

8. The method of claim 1, wherein configuring the affected system domains includes:

configuring a first switch in a first affected domain defining a first end of the affected signal path from the first to the second mode;

configuring a crossbar switch defining a second end for the affected signal path from the first mode to the second mode.

9. The method of claim 1, wherein the computing system includes a system control board and configuring the affected system domains includes configuring the system domains from the system control board.

10. The method of claim 1, wherein:

operating the unaffected system domains in the first mode includes separating a plurality of information in each transaction into two messages and transmitting the two messages in parallel, each on a respective half of the signal paths; and

operating the affected system domains in the second mode includes transmitting the messages in series on a single half of the affected signal path.

11. The method of claim 1, wherein:

operating the unaffected system domains in the first mode includes separating a plurality of information in each transaction into two messages and transmitting the two messages in parallel in a predetermined number of cycles; and

operating the affected system domains in the first mode includes transmitting a plurality of information in each transaction in a single message in twice the predetermined number of cycles.

12. The method of claim 1, further comprising at least one of:

defining the system domains;

pausing operations after detecting the failure but before reconfiguring the affected system domain; and

resetting the computing system after detecting the failure but before reconfiguring the affected system domain.

13. The method of claim 1, wherein dynamically reconfiguring a signal path affected by the condition from a first mode to a second mode includes dynamically reconfiguring the signal path affected condition from a normal mode to a degraded mode.

14. The method of claim 1, wherein dynamically reconfiguring a signal path affected by the condition from a first mode to a second mode includes dynamically reconfiguring the signal path affected condition from a degraded mode to a normal mode.

15. A method for reconfiguring a signal path in a computing system including a plurality of system domains, the method consisting essentially of:

detecting a condition triggering a reconfiguration of the computing system; and

reconfiguring a signal path affected by the condition from a first mode to a second mode responsive to detecting the condition; and

operating the affected system domains in the second mode and the unaffected system domains in the first mode.

16. A method for reconfiguring a signal path in a computing system including a plurality of system domains, the method comprising:

detecting a condition triggering a reconfiguration of the computing system; and

reconfiguring a signal path affected by the condition from a first mode to a second mode responsive to detecting the condition;

operating the affected system domains in the second mode and the unaffected system domains in the first mode.

17. A computing system, comprising:

a plurality of system domains;

a centerplane interconnecting the system domains;

a system controller capable of detecting a condition triggering a reconfiguration and reconfiguring a signal path affected by the condition from a first mode to a second mode.

18. The computing system of claim 17, wherein the system domains are dynamically configured.

19. The computing system of claim 17, wherein each system domain includes:

a system board;

an expansion board; and

an I/O board.

20. The computing system of claim 19, wherein the system board, expansion board, and I/O board comprise a system board set.

21. The computing system of claim 17, wherein the centerplane comprises a plurality of crossbar switches interconnecting the system domains.

22. The computing system of claim 21, wherein the plurality of crossbar switches includes:

a data crossbar switch;

an address crossbar switch; and

a response crossbar switch.

23. A computing system, comprising:

a plurality of system domains;

a plurality of signal paths among the system domains; and

a system controller capable of condition triggering a reconfiguration and dynamically reconfiguring a signal path affected by the condition from a first mode to a second mode.

24. The computing system of claim 23, wherein the system domains are dynamically configured.

25. The computing system of claim 23, wherein each system domain includes:

a system board;

an expansion board; and

an I/O board.

26. The computing system of claim 25, wherein the system board, expansion board, and I/O board comprise a system board set.

27. The computing system of claim 23, wherein the centerplane comprises a plurality of crossbar switches interconnecting the system domains.

28. The computing system of claim 27, wherein the plurality of crossbar switches includes:

a data crossbar switch;

an address crossbar switch; and

a response crossbar switch.

29. The computing system of claim 23, wherein the plurality of signal paths includes:

a plurality of data signal paths;

a plurality of address signal paths; and

a plurality of response signal paths.

30. The computing system of claim 23, wherein each signal path comprises:

a first half capable of transmitting a first message containing a first portion of the information in a given transaction in the normal mode; and

a second half capable of transmitting a second message containing a second portion of the information in the transaction in the normal mode.

31. The computing system of claim 30, wherein both the first and second halves are capable of transmitting a single message containing both the first and second portions in the degraded mode.

32. The computing system of claim 23, wherein each signal path terminates at a first end in a first one of the system domains, routes through a crossbar switch, and terminates at a second end in a second one of the system domains.

33. The computing system of claim 32, wherein the system domains and the signal paths are configurable by configuring the first end, the second end, and the crossbar switch.

34. A computing system, comprising:

a system controller;

a plurality of system domains;

at least one crossbar switch interconnecting the system domains;

a plurality of signal paths, each signal path terminating at a first end in a first one of the system domains, routing through the crossbar switch, and terminating at a second end in a second one of the system domains; and

a console connection over which the system controller can, responsive to a condition triggering a reconfiguration, reconfigure a plurality of the system domains affected by the condition and the crossbar switch to operate the affected signal paths in a first mode while the signal paths domains unaffected by the failure operate in a second mode.

35. A computing system, comprising:

a plurality of system boards from which a plurality of system domains can be defined;

a centerplane including at least one crossbar switch interconnecting the system domains to provide a plurality of signal paths among the system boards; and

a system control board hosting a system controller capable of defining the system domains, configuring the system domains and the crossbar switch to operate the signal paths in a first mode, and, responsive to a condition triggering a reconfiguration, reconfiguring the affected system domains and the crossbar switch to operate the affected signal paths in a second mode while the unaffected signals paths operate in the first mode.